National Institute of Environmental Health Sciences

Energy, energy efficiency, and the built environment

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Abstract:

Since the last decades of the 19th century, technological advances have brought substantial improvements in the efficiency with which energy can be exploited to service human needs. That trend has been accompanied by an equally notable increase in energy consumption, which strongly correlates with socioeconomic development. Nonetheless, feasible gains in the efficiency and technology of energy use in towns and cities and in homes have the potential to contribute to the mitigation of greenhouse-gas emissions, and to improve health, for example, through protection against temperature-related morbidity and mortality, and the alleviation of fuel poverty. A shift towards renewable energy production would also put increasing focus on cleaner energy carriers, especially electricity, but possibly also hydrogen, which would have benefits to urban air quality. In low-income countries, a vital priority remains the dissemination of affordable technology to alleviate the burdens of indoor air pollution and other health effects in individuals obliged to rely on biomass fuels for cooking and heating, as well as the improvement in access to electricity, which would have many benefits to health and wellbeing.

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Resource Description

Exposure : ☑

weather or climate related pathway by which climate change affects health

Air Pollution, Indoor Environment, Unspecified Exposure

Air Pollution: Particulate Matter

Geographic Feature: ☑

resource focuses on specific type of geography

Urban

Geographic Location: ☑

resource focuses on specific location

Global or Unspecified

Health Co-Benefit/Co–Harm (Adaption/Mitigation): ☑

specification of beneficial or harmful impacts to health resulting from efforts to reduce or cope with

greenhouse gases

A focus of content

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease, Morbidity/Mortality, Respiratory Effect, Other Health Impact

Infectious Disease: Airborne Disease

Airborne Disease: Tuberculosis

Respiratory Effect: Asthma, Chronic Obstructive Pulmonary Disease, Lung Cancer, Other Respiratory Effect

Respiratory Condition (other) : lower respiratory infections;tuberculosis

Other Health Impact: cataracts

Intervention:

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Mitigation

Resource Type:

format or standard characteristic of resource

Review

Timescale:

time period studied

Time Scale Unspecified